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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/977,883	10/11/2001	Douglas A. Hamrin		4440

7590

06/04/2003

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EXAMINER

CUEVAS, PEDRO J

ART UNIT

PAPER NUMBER

2834

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary****Application No.**

09/977,883

**Applicant(s)**

HAMRIN ET AL.

**Examiner**

Pedro J. Cuevas

**Art Unit**

2834

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-37 and 41-75 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-37, and 41-75 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_ 6) ☐ Other:

**DETAILED ACTION**

***Specification***

1. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
2. The disclosure is objected to because of the following informalities: the claim numbering is not correct. Claims 38-40 are missing. There are no dependency errors in the present numbering, but there can be when corrected.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

3. Claims 1, 2, 6-9, 14, 19, 20, 30-33, 37, 41, 46, 51, 52, 62, and 63 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 3,882,671 to Nebgen.

Nebgen clearly teaches the use of a gasification method with fuel gas cooling having a compressor (21) rotationally coupled to a turbine (7) having a heater (11) fluidly disposed downstream of the turbine, between the turbine outlet and a recuperator (17) for transferring heat from the turbine exhaust to the compressed air, a heater (18) coupled to the recuperator to heat the recuperator, a catalytic combustor (25) to react fuel with the heated compressed air, a passage disposed fluidly between the outlet of the recuperator exhaust side and the compressor inlet for passing the turbine exhaust exiting from the recuperator through the compressor to be compressed together with air, and a fuel pump (13) fluidly connected to the combustor for providing fuel to the combustor together with the compressed air, the method comprising:

rotating the compressor to pass compressed air through the recuperator and the combusted and into the turbine;

heating the turbine exhaust flow prior to the exhaust flow entering the recuperator to transfer heat through the recuperator to the compressed air prior to the compressed air entering the combustor;

passing the turbine exhaust exiting from the recuperator through the compressor to be compressed together with air;

providing fuel to the combustor together with the compressed air; and  
combusting the fuel in the turbine exhaust flow.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 3-5, 11-13, 15-18, 21-29, 34-36, 42-44, 47-50, 53-61, and 64-75 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 3,882,671 to Nebgen in view of U.S. Patent No. 4,039,804 to Reed et al.

Nebgen disclose the construction of a gasification method with fuel gas cooling as described above.

However, it fails to disclose:

discontinuing to heat the turbine exhaust flow when the combusted catalyst has reached its light-off temperature;

monitoring the turbine exhaust temperature to determine when the combusted catalyst has reached its light-off temperature;

discontinuing to heat the turbine exhaust flow when the turbine exhaust temperature has reached a predetermined value;

providing fuel to the combusted when the catalyst has reached its light-off temperature;

a motor/generator rotationally coupled to the turbine for rotating therewith to produce power;

a DC output bus for providing the power to a load; and

a bi-directional motor/generator power converter connected between the motor/generator and the DC bus to automatically control system speed by varying the flow of power, after system startup, from the motor/generator to the DC bus and from the DC bus to the motor/generator.

Reed et al. teach the construction of a system and method for monitoring industrial gas turbine operating parameters comprising:

discontinuing to heat the turbine exhaust flow when the combusted catalyst has reached its light-off temperature;

monitoring the turbine exhaust temperature to determine when the combusted catalyst has reached its light-off temperature;

discontinuing to heat the turbine exhaust flow when the turbine exhaust temperature has reached a predetermined value;

providing fuel to the combustor when the catalyst has reached its light-off temperature;

a motor/generator rotationally coupled to the turbine for rotating therewith to produce power, connected between the turbine and the motor/generator power converter for transferring power from the turbine to the motor/generator power converter to reduce system speed, and for transferring power from the motor/generator power converter to the turbine to increase system speed;

a DC output bus for providing the power to a load;

a bi-directional motor/generator power converter connected between the motor/generator and the DC bus to automatically control system speed by varying the flow of power, after system startup, from the motor/generator to the DC bus and from the DC bus to the motor/generator;

a fuel control system connected to the combustor for automatically controlling turbine temperature to a temperature selected in accordance with the system speed to which the system is being controlled, by varying a flow of fuel to the combustor;

a bi-directional output power converter connected between said DC bus and the load for automatically controlling a DC bus voltage by varying the power applied from the DC bus to the load and from the load to the DC bus; and

a power controller operating the motor/generator power converter, the output power converter, and the fuel control system to automatically control turbine temperature, system speed, and a DC bus voltage;

for the purpose of providing gas turbine power plant control system inputs representative of the industrial gas turbine operating parameters.

It would have been obvious to one skilled in the art at the time the invention was made to use the system and method for monitoring industrial gas turbine operating parameters disclosed by Reed et al. on the gasification method with fuel gas cooling disclosed by Nebgen for the purpose of providing gas turbine power plant control system inputs representative of the industrial gas turbine operating parameters.

***Conclusion***


6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pedro J. Cuevas whose telephone number is (703) 308-4904. The examiner can normally be reached on M-F from 8:30 - 6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor R. Ramirez can be reached on (703) 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-1341 for regular communications and (703) 305-3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Pedro J. Cuevas  
May 30, 2003

  
PEDRO J. CUEVAS  
EXAMINER  
MAY 30 2003  
RECEIVED